

LAKE ATIAMURI FIELD TRIP

W.B. Shaw

A group of eight met at the boat ramp at Atiamuri village on a somewhat foggy morning on 25th August 2012. Numbers were limited by the availability of only a single boat. We started by crossing the lake, through the lifting fog, to inspect the western shoreline not far from the dam. On steep ignimbrite faces here we found wilding pines (*Pinus radiata*), Spanish heath (*Erica lusitanica*), and koromiko (*Hebe stricta*), with harakeke (flax; *Phormium tenax*) and *Isolepis reticularis* at the base of the cliffs. We then proceeded up the northern arm, where there was a 'riparian' strip of mixed secondary indigenous vegetation adjoining the plantation forest on adjacent slopes. Species in the riparian strip included wheki (*Dicksonia squarrosa*), strawberry dogwood (*Cornus capitata*), kohuhu (*Pittosporum tenuifolium*), karamu (*Coprosma robusta*), mamaku (*Cyathea medullaris*), and pate (*Schefflera digitata*).

Scattered harakeke were present on the shoreline, with many toppled pine trees lying in the lake. There were local small patches of raupo (*Typha orientalis*) and a clear zone of fluctuating water level along the edge, with thick beds of hornwort (*Ceratophyllum demersum*). In places there was pine forest to the lake margin, particularly associated with steep ignimbrite faces.

As we proceeded up the arm, the vegetation became somewhat more 'interesting', being kanuka (*Kunzea ericoides*)-dominant indigenous forest, but was restricted to a narrow strip (sometimes very narrow) adjacent to farmland, with scattered wilding pines.

Further evidence of fluctuating water levels was provided by harakeke 'perched' on 'stalks' 30-40 cm above the water surface.

We proceeded to the head of the eastern arm, to the delta of the Whangapoa Stream. By this stage the fog had lifted completely and it was a beautiful sunny day. The upper part of this arm is dairy farmland, and we were only about 1.5 km from SH30, the Atiamuri-Rotorua highway. A major tributary of the Whangapoa Stream is the Tahunaatra Stream, which is crossed by SH30. Much of this delta was exposed, with mats of dead creeping bent (*Agrostis stolonifera*) and scattered rushes, including soft rush (*Juncus effusus*), *J. edgariae*, and *J. sarophorus*. Aquatic turf species included *Lilaeopsis novae-zelandiae*, *Glossostigma elatinoides*, *Myriophyllum propinquum*, and local *Crassula sinclairii*. Our gumboots were put to good use while exploring the delta, which varied from solid sand to fine muddy sediment. Fine muds had patches of water purslane (*Ludwigia palustris*) with *Elatine gratioloides* and arrow grass (*Triglochin striata*). Crack willow (*Salix fragilis*) were present on the delta margins, with kohuhu, wilding pines, kanuka, and wheki. Empty shells of kakahi (freshwater mussel; *Echyridella menziesi*) were present on the delta, along with large pieces of Taupō pumice, which had clearly floated to their resting places.

Downstream of the delta there was an intriguing low ‘treeland’ of harakeke and Spanish heath perched on dead pine stumps in shallow water.

As we ‘trolled’ down the eastern (i.e. west-facing) shoreline of the northern arm, we stopped to inspect steep dry ignimbrite faces, with *Drosera auriculata*, *Dracophyllum strictum*, koromiko (*Hebe stricta*), karamu, Montpellier broom (*Teline monspessulana*), wilding radiata pine, and Spanish heath. An interesting find here was *Lobelia anceps*. *Anaphalioides trinervis*, *Lobelia angulata*, and *Glossostigma elatinoides* were present at the water line.

We had very clear views of Pohaturoa, the low rhyolite mountain (540 m) to the south of Atiamuri Village. Pohaturoa formerly had a thatch of pine forest over the summit, but that has now been removed and indigenous vegetation has become dominant. The summit is of great cultural significance, with more than 30 whare (house) sites, old gardens, and numerous storage pits. It was a heavily defended pā, with a long history.

The summit is, however, vulnerable to lightning strike, which is apparently not uncommon during electrical storms.

We then left the northern arm and proceeded up the main arm, directly to the east. There were small islands close to the edge of the lake, with stunted Douglas-fir (*Pseudotsuga menziesii*), looking very much like a North American lakeside environment. Scattered cut stumps were protruding from the water in places on the margins.

We stopped at a small raupo wetland and found *Ranunculus amphitrichus*, *Rorippa palustris*, *Lepidosperma australe*, *Leucopogon fraseri*, and *Pomaderris amoena*.

The day was getting on so we motored to the head of the main arm, to the base of the Ohakuri hydro dam. The northern side of the lower part of the arm is pine forest, along with the southern side of the upper arm. The lower section, on the southern side, is dairy farms, along with the middle section on the northern side, and these were of little botanical or ecological interest. The upper part of the arm, though, is of some interest. There are patches of large kowhai (*Sophora tetraptera*), amounting to small but impressive examples of kowhai-dominant forest. Tanekaha (*Phyllocladus trichomanoides*) is relatively common, similar as per the upper reaches of some other Waikato hydro lakes. Towering ignimbrite cliffs overhang the lake, which is quite narrow in places. These cliffs are generally very dry, but there was a small stream trickling down the cliff in one place.

BIRDS RECORDED AT LAKE ATIAMURI

Shag - little black, shag - black, shag - little, bellbird, black swan, chaffinch, duck - grey, duck - mallard, duck - grey mallard hybrids, grey teal, grey warbler, fantail, harrier, kingfisher, paradise shelduck, pūkeko, pied stilt, scaup, spur-winged plover, tui, waxeye, welcome swallow, white-faced heron, whitehead. The number of black shags (24) indicated a sizable population.

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LAKE ATIAMURI VASCULAR PLANT SPECIES LIST

25 AUGUST 2012

Sarah Beadel

INDIGENOUS SPECIES

Gymnosperms

<i>Dacrydium cupressinum</i>	rimu
<i>Phyllocladus trichomanoides</i>	tanekaha
<i>Podocarpus totara</i> var. <i>totara</i>	totara

Monocot. trees and shrubs

<i>Cordyline australis</i>	ti kouka, cabbage tree
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Dicot. trees and shrubs

<i>Aristotelia serrata</i>	makomako, wineberry
<i>Brachyglottis repanda</i>	rangiora
<i>Carmichaelia australis</i>	makaka, maukoro
<i>Carpodetus serratus</i>	putaputaweta
<i>Coprosma grandifolia</i>	kanono
<i>Coprosma robusta</i>	karamu
<i>Coriaria arborea</i> var. <i>arborea</i>	tutu
<i>Dracophyllum strictum</i>	totorowhiti
<i>Gaultheria antipoda</i>	tawiniwini
<i>Gaultheria oppositifolia</i> × <i>G. paniculata</i>	
<i>Gaultheria paniculata</i>	koropuka
<i>Geniostoma ligustrifolium</i> var. <i>ligustrifolium</i>	hangehange
<i>Griselinia lucida</i>	puka
<i>Hebe stricta</i> var. <i>stricta</i>	koromiko
<i>Knightia excelsa</i>	rewarewa
<i>Kunzea ericoides</i>	kanuka
<i>Leptecophylla juniperina</i> var. <i>juniperina</i>	prickly mingimingi
<i>Leptospermum scoparium</i> agg.	manuka
<i>Leucopogon fasciculatus</i>	mingimingi
<i>Leucopogon fraseri</i>	patotara
<i>Melicytus ramiflorus</i> subsp. <i>ramiflorus</i>	mahoe
<i>Myrsine australis</i>	mapou
<i>Pittosporum colensoi</i>	rautawhiri
<i>Pittosporum tenuifolium</i>	kohuhu
<i>Pomaderris amoena</i>	tauhinu
<i>Pseudopanax arboreus</i>	whauwhaupaku, five finger
<i>Pseudopanax crassifolius</i>	horoeaka, lancewood

<i>Schefflera digitata</i>	pate
<i>Sophora tetraptera</i>	kowhai
<i>Weinmannia racemosa</i>	kamahi

Dicot. lianes

<i>Muehlenbeckia australis</i>	puka
<i>Rubus schmidelioides</i> var. <i>schmidelioides</i>	akatataramoa, bush lawyer

Lycopods and psilopsids

<i>Lycopodium volubile</i>	waewaekoukou
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Ferns

<i>Asplenium flabellifolium</i>	necklace fern
<i>Asplenium flaccidum</i>	makawe
<i>Asplenium polyodon</i>	petako
<i>Azolla filiculoides</i>	retoretore
<i>Blechnum chambersii</i>	rereti
<i>Blechnum discolor</i>	petipeti, crown fern
<i>Blechnum minus</i>	swamp kiokio
<i>Blechnum novae-zelandiae</i>	kiokio
<i>Blechnum vulcanicum</i>	korokio
<i>Cyathea dealbata</i>	ponga, silver fern
<i>Cyathea medullaris</i>	mamaku
<i>Dicksonia fibrosa</i>	wheki-ponga
<i>Dicksonia squarrosa</i>	wheki
<i>Diplazium australe</i>	
<i>Gleichenia microphylla</i>	waewaekaka, swamp umbrella fern
<i>Histiopteris incisa</i>	matata, water fern
<i>Hypolepis ambigua</i>	
<i>Hypolepis rufobarbata</i>	
<i>Microsorium pustulatum</i>	kowaowao, hound's tongue fern
<i>Paesia scaberula</i>	matata
<i>Pneumatopteris pennigera</i>	pakau
<i>Pteridium esculentum</i>	rarahū, bracken
<i>Pteris macilenta</i>	sweet fern
<i>Pteris tremula</i>	turawera, shaking brake
<i>Pyrrosia eleagnifolia</i>	leather-leaf fern

Orchids

<i>Earina autumnalis</i>	raupeka
<i>Thelymitra longifolia</i>	maikuku

Grasses

<i>Austroderia fulvida</i>	toetoe
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<i>Deyeuxia avenoides</i>	
<i>Dichelachne crinita</i>	patiti, plume grass
<i>Microlaena stipoides</i>	patiti, meadow rice grass
<i>Poa anceps</i> agg.	
<i>Poa imbecilla</i>	
<i>Rytidosperma gracile</i>	
<i>Rytidosperma</i> sp.	

Sedges

<i>Carex dipsacea</i>	
<i>Carex geminata</i> agg.	rautahi
<i>Carex secta</i>	purei
<i>Carex virgata</i>	purei
<i>Cyperus ustulatus</i> f. <i>ustulatus</i>	toetoe, upokotangata
<i>Isolepis reticularis</i>	
<i>Lepidosperma australe</i>	
<i>Morelotia affinis</i>	
<i>Schoenoplectus tabernaemontani</i>	kapungawha
<i>Uncinia uncinata</i>	kamu matau a Maui

Rushes

<i>Juncus edgariae</i>	wi
<i>Juncus sarophorus</i>	wi
<i>Lyzula picta</i> var. <i>picta</i>	

Monocot. herbs (other than orchids, grasses, sedges, and rushes)

<i>Astelia fragrans</i>	kakaha
<i>Dianella nigra</i>	turutu
<i>Lemna minor</i>	karearea
<i>Phormium tenax</i>	harakeke, flax
<i>Potamogeton ochreatus</i>	
<i>Triglochin striata</i>	arrow grass
<i>Typha orientalis</i>	raupo

Composite herbs

<i>Anaphalioides trinervis</i>	puatea
<i>Euchiton audax</i>	
<i>Leptinella squalida</i> subsp. <i>squalida</i>	
<i>Pseudognaphalium luteoalbum</i> agg.	pukatea
<i>Senecio minimus</i>	
<i>Senecio quadridentatus</i>	cotton fireweed, pekapeka

Dicot. herbs (other than composites)

<i>Acaena anserinifolia</i>	piripiri
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<i>Acaena novae-zeelandiae</i>	piripiri
<i>Callitriche petriei</i> subsp. <i>petriei</i>	
<i>Callitriche stagnalis</i>	starwort
<i>Crassula sinclairii</i>	
<i>Drosera auriculata</i>	sundew, wahu
<i>Elatine gratioloides</i>	
<i>Glossostigma cleistanthum</i>	
<i>Glossostigma elatinoides</i>	
<i>Haloragis erecta</i> subsp. <i>erecta</i>	toatoa
<i>Hydrocotyle novae-zeelandiae</i> var. <i>novae-zeelandiae</i>	
<i>Lilaeopsis novae-zeelandiae</i>	
<i>Lobelia anceps</i>	punakuru
<i>Lobelia angulata</i>	panakenake
<i>Myriophyllum propinquum</i>	
<i>Myriophyllum triphyllum</i>	
<i>Parabebe lanceolata</i>	
<i>Ranunculus amphitrichus</i>	kawariki
<i>Rorippa palustris</i>	hanea
<i>Wahlenbergia violacea</i>	rimuroa

NATURALISED AND EXOTIC SPECIES

Gymnosperms

<i>Pinus pinaster</i>	maritime pine
<i>Pinus radiata</i>	radiata pine
<i>Pseudotsuga menziesii</i>	Douglas fir

Dicot. trees and shrubs

<i>Acacia longifolia</i>	Sydney golden wattle
<i>Acacia melanoxylon</i>	Tasmanian blackwood
<i>Berberis glaucocarpa</i>	barberry
<i>Betula pendula</i>	silver birch
<i>Buddleja davidii</i>	buddleia
<i>Cornus capitata</i>	strawberry dogwood
<i>Cotoneaster glaucophyllus</i>	cotoneaster
<i>Crataegus monogyna</i>	hawthorn
<i>Cytisus scoparius</i>	broom
<i>Erica lusitanica</i>	Spanish heath
<i>Eucalyptus</i> sp.	eucalyptus
<i>Leycesteria formosa</i>	Himalayan honeysuckle
<i>Lupinus arboreus</i>	lupin
<i>Populus nigra</i> 'Italica'	Lombardy poplar
<i>Pyracantha angustifolia</i>	orange firethorn
<i>Rubus</i> sp. (<i>R. fruticosus</i> agg.)	blackberry

<i>Salix cinerea</i>	grey willow
<i>Salix fragilis</i>	crack willow
<i>Teline monspessulana</i>	Montpellier broom
<i>Ulex europaeus</i>	gorse

Dicot. lianes

<i>Hedera helix</i>	ivy
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Grasses

<i>Agrostis capillaris</i>	browntop
<i>Agrostis stolonifera</i>	creeping bent
<i>Anthoxanthum odoratum</i>	sweet vernal
<i>Cortaderia selloana</i>	pampas
<i>Dactylis glomerata</i>	cocksfoot
<i>Glyceria maxima</i>	reed sweetgrass
<i>Paspalum distichum</i>	Mercer grass
<i>Poa annua</i>	annual poa
<i>Rytidosperma racemosum</i>	danthonia
<i>Schedonorus arundinaceus</i>	tall fescue

Rushes

<i>Juncus articulatus</i>	jointed rush
<i>Juncus effusus</i> var. <i>effusus</i>	soft rush, leafless rush
<i>Juncus microcephalus</i>	South American rush

Monocot. herbs (other than orchids, grasses, sedges, and rushes)

<i>Egeria densa</i>	egeria
<i>Elodea canadensis</i>	Canadian pondweed
<i>Lagarosiphon major</i>	lagarosiphon

Composite herbs

<i>Aster subulatus</i>	sea aster
<i>Cirsium vulgare</i>	Scotch thistle
<i>Conyza sumatrensis</i>	broad-leaved fleabane
<i>Hypochaeris radicata</i>	catsear
<i>Jacobaea vulgaris</i>	ragwort
<i>Leontodon taraxacoides</i>	hawkbit
<i>Mycelis muralis</i>	wall lettuce
<i>Sonchus oleraceus</i>	puha, sow thistle

Dicot. herbs (other than composites)

<i>Centaurium erythraea</i>	centaury
<i>Ceratophyllum demersum</i>	hornwort
<i>Fumaria muralis</i>	scrambling fumitory

<i>Galium palustre</i>	marsh bedstraw
<i>Lotus pedunculatus</i>	lotus
<i>Ludwigia palustris</i>	water purslane
<i>Myosotis laxa</i> subsp. <i>caespitosa</i>	water forget-me-not
<i>Orobanche minor</i>	broomrape
<i>Persicaria hydropiper</i>	water pepper
<i>Phytolacca octandra</i>	inkweed
<i>Plantago lanceolata</i>	narrow-leaved plantain
<i>Plantago major</i>	broad-leaved plantain
<i>Ranunculus repens</i>	creeping buttercup
<i>Rumex obtusifolius</i>	broad-leaved dock
<i>Solanum nigrum</i>	black nightshade
<i>Verbascum thapsus</i>	woolly mullein
<i>Veronica anagallis-aquatica</i>	water speedwell
<i>Veronica persica</i>	scrambling speedwell

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